A PLACE FOR ME IN AEROSPACE

Choosing a career path is one of the most important decisions that a young person has to make. How do I find a job that's best for me? Will the job I do make enough money for me to do all the things that I want to do? Join in these job searches and find out if the world of aerospace is the place for you. And no, you don't have to be a rocket scientist to work for NASA!

Activity 1: The first thing you have to do is to find out what types of jobs people in aerospace do. Of course, the first ones that come to mind are rocket scientists, engineers, and astronauts. But did you know that aerospace includes technicians, maintenance crews, pilots, accountants, computer specialists, and sheet metal workers?

After reading through the job list below, choose 2 or 3 that are of interest to you. Record those on a piece of paper with the following information:

- Job title (the name of the job, for example-test pilot)
- What educational training is required to qualify for this job?
- Job description-list several things that you would have to do if you had this job
- Education or training needed for this job
- Why do you think you would like this job?

Aircraft Escape Systems
http://www.dfrc.nasa.gov/trc/careers/escape/Escape.html

Instrumentation Engineer
http://www.dfrc.nasa.gov/trc/careers/instrument/instrumentation.html

Life Support Equipment
http://www.dfrc.nasa.gov/trc/careers/life/life.html

NASA Research Pilots
http://www.dfrc.nasa.gov/trc/careers/research/research.html

Sheet Metal Worker
http://www.dfrc.nasa.gov/trc/careers/sheet/SheetMetal.html

Fluid System Lab
http://www.dfrc.nasa.gov/trc/careers/fluid/Fluid_Sys.html

Machine Shop
http://www.dfrc.nasa.gov/trc/careers/machine/Machineshop.html

Avionics Communications
http://www.dfrc.nasa.gov/trc/careers/comm/comm.html

Aerodynamics Engineers
http://www.dfrc.nasa.gov/trc/careers/aerodynam/aerodynam.html

Activity 2: List your talents, interests, hobbies, and favorite subject(s) in school. Go to the following web site: http://quest.nasa.gov/services/people.html, click on Aerospace Team. Scroll down to the field "Related Interests associated with the individual or their work". Enter a talent, interest, hobby, or favorite subject from your list and click on "Find Records". Choose a biography from the results and GO to the URL to their page. -Read the biography. Did their interest (which you have in common) influence the NASA employee to choose their career?

Activity 3: Most jobs in a high-tech field like aerospace require that you have training after high school. What classes in high school will help you to become accepted at technical schools and universities? Choose the "Careers in Aeronautics" section of http://kids.msfc.nasa.gov/Pioneers/

Activity 4: People think professional basketball players must be tall. What about astronauts? Is height a consideration in selecting astronauts? Is it possible to be too tall to be an astronaut? What are the height requirements for astronauts? http://www.spaceflight.nasa.gov/shuttle/reference/factsheets/asseltrn.html

Activity 5: Who were the first seven astronauts and what was the name of the program they flew? How has astronaut selection changed since the first astronauts were selected? http://www.spaceflight.nasa.gov/shuttle/reference/factsheets/asseltrn.html

Activity 6: What does the word "astronaut" mean in Latin? Why do you think this word was chosen? What are the 4 possible astronaut assignments? Which one would be interesting to you? Look under astronauts at http://kids.msfc.nasa.gov/Pioneers/

Conclusion:

Learners are invited to make conclusions from a personal perspective, to make comparisons with their own experience or discuss with other students their findings:

If you could design your perfect job:

- What would it be?
- What would you do every day?
- Where would you live?
- What hours would you work?
- What education or training would you need?
- How much money would you make?
- Would you be the boss or the employee?
- Would you like to travel?
- Draw a picture of yourself doing this job

Notes for Parents and Teachers:

For English Language Learners and other struggling readers who will have difficulty completing these activities on their own, it is strongly suggested that the activities be modified as suggested below.

Activity 1 for Sheltered English Students: Begin with a class brainstorming session about careers in aerospace. Students may be able to describe some jobs without knowing the exact vocabulary, and teacher should then provide the appropriate terminology. Develop a class list of jobs and related vocabulary. For S.D.A.I.E., introduce photos or slides to illustrate some of the jobs. Brainstorm and make a class chart on what we know about these jobs, and what we want to find out. Keep the chart, the aerospace job vocabulary list and photos posted in the room during the unit.

Provide each student with the list of jobs, for his/her personal portfolio. Briefly discuss the nature of each job. After discussing the jobs as a class, give each student an index card. Call the card their "Job Application Card". Have them put their name on the card, then list two or three jobs they think they might like. Collect the cards. After class, use

the cards to group students in groups of 3 to 5, according to "job preference". Group heterogeneously, that is, in groups of mixed ability levels.
At the next class session, give each student a worksheet with their name and job assignment filled out, and space to fill in their research findings on the job. Give groups several class sessions to complete their research.

Activity 2 Teachers' Note: As an extension to this activity, bring in a guest speaker in a high tech field. During National Engineers Week, many aerospace engineers are available as volunteer speakers < http://www.eweek.org>.

Activity 3 Teachers' Note: This activity could be extended to include a discussion on diversity and stereotypes about race, gender, height, and weight.

Conclusion Teachers' Note: It is suggested that the Conclusion be used as a culminating authentic assessment activity, so that students have had a chance to gather realistic information about careers and job options. Some students may be tempted to trivialize this activity by answering, for example, that they want to be paid a million dollars to ride their skate board. Teachers should encourage students to take this reflection assignment seriously, and think realistically about their career options, goals and strategies.

Addressing the Standards

The activities in this Subject Sampler are most closely aligned with the following standards at the 4-6 grade levels:

I. The National Science Education Standards for grades 4-6
http://books.nap.edu/html/nses/html/index.html

Content Standard A - Science as Inquiry
Content Standard G - History and Nature of Science: History of Science, Nature of Science, and Science as a Human Endeavor

II. 2061 Benchmarks by AAAS
Benchmark 1 - The Nature of Science

B. Scientific Inquiry
C. The Scientific Enterprise

III. Technology Standards

National Educational Technology Foundation Standards for Students

3b. Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

4a. Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.

5a. Students use technology to locate, evaluate, and collect information from a variety of sources.

b. Students use technology tools to process data and report results.

6. Technology problem-solving and decision-making tools

6a. Students use technology resources for solving problems and making informed decisions.

b. Students employ technology in the development of strategies for solving problems in the real world.